

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
16 December 2004 (16.12.2004)

PCT

(10) International Publication Number  
**WO 2004/109115 A1**

(51) International Patent Classification<sup>7</sup>: **F04C 29/10**,  
15/04, 29/08

(21) International Application Number:  
PCT/KR2004/001029

(22) International Filing Date: 3 May 2004 (03.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10-2003-0037658 11 June 2003 (11.06.2003) KR

(71) Applicant (for all designated States except US): **LG ELECTRONICS INC.** [KR/KR]; 20, Yoido-dong, Youngdungpo-gu, Seoul 150-721 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BAE, Ji Young**

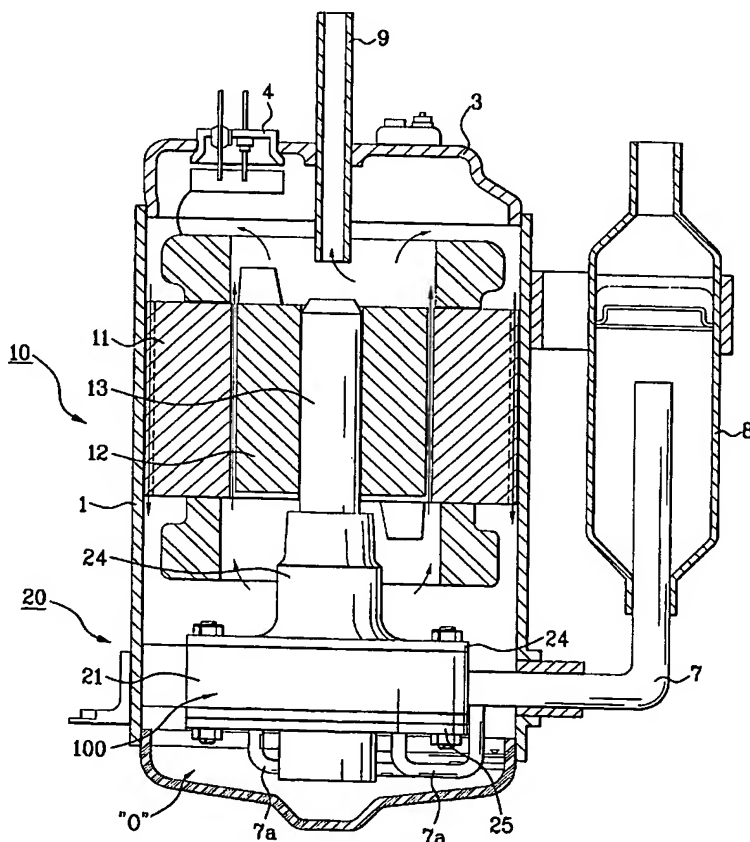
[KR/KR]; Yongho 2-dong, 521-18, Nam-gu, Busan 608-767 (KR). **PARK, Kyoung Jun** [KR/KR]; H-210, LG Electronics Dormitory, Gaumjung-dong, Changwon-si, Gyeongsangnam-do 641-711 (KR). **JANG, Chang Yong** [KR/KR]; Bulim APT., 101-1005, Maegok-dong, Buk-gu, Gwangju-si 500-815 (KR). **KIM, Hyeon** [KR/KR]; Daewoo APT., 201-303, Namsan-dong, Changwon-si, Gyeongsangnam-do 641-090 (KR). **HA, Sam Chul** [KR/KR]; Lotte APT., 13-201, Yongho-dong, Changwon-si, Gyeongsangnam-do 641-784 (KR).

(74) Agents: **BAHNG, Hae Cheol** et al.; Kims International Patent & Law Office, 15th Floor Yo Sam Building, 648-23, Yeoksam-dong, Kangnam-gu, Seoul 135-080 (KR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,

[Continued on next page]

(54) Title: **ROTARY COMPRESSOR**



(57) Abstract: Disclosed is a rotary compressor having two compression capacities in clockwise and counterclockwise directions. The rotary compressor includes: a driving shaft (13) being rotatable clockwise and counterclockwise, and having an eccentric portion (13a) of a predetermined size; a cylinder (21) having a predetermined inner volume; roller (22) installed rotatably on an outer circumference of the eccentric portion (13a) so as to contact an inner circumference of the cylinder, performing a rolling motion along the inner circumference and forming a fluid chamber (29) to suck and compress fluid along with the inner circumference; a vane (23) installed elastically in the cylinder to contact the roller; upper and lower bearings (24, 25) installed respectively in upper and lower portions of the cylinder (21), for rotatably supporting the driving shaft (13) and hermetically sealing the inner volume; suction (27) and discharge ports (26) communicating with the fluid chamber (29) depending on the rotational direction of the driving shaft (13).



KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*